

In the 2nd volume of the 'Synopsis of the British Diatomaceæ,' the Rev. W. Smith states, that he has never observed this siliceous sheath, and that "probably it may have been an *appearance* resulting from the condensation and corrugation of the mucus developed around the reproductive body."

I need scarcely say that Mr. Smith's conclusion is untenable, for no kind of mucus will resist the action of a red heat and nitric acid. Moreover, the specimen was not an isolated one, but hundreds of them were present. It is, however, perhaps excusable that Mr. Smith should consider me as having been misled by an appearance, having himself mistaken the cellular appearance upon the valves of the Diatomaceæ for the expression of a cellular structure.

In regard to the "blunder" committed by Dr. Hassall in the formation of the name *Gyrosigma* (which is not alliterative however), I may remark, that this name was retained in the 'Micrographic Dictionary' and elsewhere, because it had claims from priority, and from its adoption by Kützing and Rabenhorst; also because, although objectionable in structure, it was less so than the name *Pleurosigma*; considering that no two authors agree as to which is the side of a Diatomacean frustule.

Again, the objection to the name *Gyrosigma* applies also to some other established generic names, as *Spirogyra*, &c., the alteration of which would cause great and unnecessary confusion.

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9 St. John's Square, May 9, 1856.

Travels in Central America. By MM. SCHERZER and WAGNER.
(Communicated by Count MARSHALL.)

Dr. Scherzer lately communicated to the Imperial Academy of Sciences at Vienna (March 6, 1856) a report of his travels through the northern portion of Central America, undertaken, in company with Dr. M. Wagner, in 1852-55. A meteorological journal was carefully kept during the whole journey; and the altitudes of mountains, plateaux, and volcanic peaks, together with the limits of the diffusion of the most important among the animals and the cultivable vegetables, were approximately determined by the aneroid barometer. Intercourse with the savage Indian tribes, and residence at villages of the settled and agricultural aborigines of Honduras, San Salvador, and Guatemala, provided the travellers with valuable materials for their ethnographical studies. The governments through whose territories MM. Scherzer and Wagner passed most readily communicated a large amount of statistical and administrative information.

An extensive entomological collection was made in Costa Rica and Guatemala; and MM. Scherzer and Wagner brought home about 40,000 specimens of Invertebrata; among which are nearly 300 undescribed species (according to MM. Klug and Hopffer, of Berlin) of Coleoptera, Lepidoptera, and Hymenoptera. There are also many new and interesting forms among the land and freshwater Mollusca.

The specimens of Vertebrata, chiefly Reptiles, are far less numerous than those of the Invertebrata; and have been presented, together with the specimens of North American rocks and fossils, by Dr. Scherzer to the scientific establishments of the Austrian Empire, or to persons making them objects of special study.

The collections made by these indefatigable travellers are at least sufficient to represent the essential characters of the Central American fauna and flora which have been hitherto scarcely known. These researches, having been pursued on the opposite sides of the Cordilleras and along the coasts of both oceans, are highly valuable with reference to the geographical distribution of organized beings; and the result proves that the ridge of the Andes is an effectual barrier to the diffusion of animals endowed with a small amount of locomotive power; especially the terrestrial molluscs, the insects, and the Arachnides.

The range of the travellers, who sometimes pursued different courses for the sake of completing the object of their journey, extends from 50° to 9° N. lat.: from the uniform and gloomy scenery about the mouth of the St. Lawrence, in Canada, to the virgin forests of the Andes, south of Costa Rica, luxuriant in the richest variety of animal and vegetable life. At Belize they embarked for the West Indies, and visited Jamaica, Hayti, St. Thomas, and Cuba. The vegetation of these isles, although strikingly luxuriant and graceful in some localities (as the Blue Mountains, in Jamaica, and the central mountain-valleys of St. Domingo), is far from rivalling in grandeur the Centro-American flora, as it wants the lofty and magnificent trees and the variety of parasitical and climbing plants characteristic of the forests of Central America. On the other hand, the tropical features of the scenery of the Antilles is in beautiful contrast with the gloomy uniformity of the North American vegetation; and a traveller, landing at Cuba, after having left Quebec eight days before, may well be struck by the change of scene.

As a general rule, it appears that the level of the highest development of vegetable life gradually rises from the ground-level from the poles to the equator. In tropical America the most magnificent flowers are those on the tops of high trees, and on the plants climbing on them. In the temperate zone the shrubs are richer in blossoms than the other vegetable forms; and from 46° lat. northwards the great variety of flowers is concentrated in the meadows.

MM. Scherzer and Wagner, besides the observation of physical facts and the collection of specimens, paid particular attention to the *status* of the West Indian Colonies, their economical relations, and their population.

Dr. Scherzer has already published his remarks on North America (in three vols.), and on Central America (in one vol.); he is far, however, from regarding the object of his researches as exhausted, as he and his companion went through the whole of their enterprise at their own expense, and consequently with limited resources (excepting the excursion to the ruins of Guirigua, in Guatemala, which was undertaken at the cost of the British Government).